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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,915	01/20/2005	Henk Heylbroeck	05-040	7099
20306 7590 01/17/2007 MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP 300 S. WACKER DRIVE 32ND FLOOR CHICAGO, IL 60606			EXAMINER CULBERT, ROBERTS P	
			ART UNIT	PAPER NUMBER
			1763	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/17/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/521,915

Applicant(s)

HEYLBROECK ET AL.

Examiner

Roberts Culbert

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1/20/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 recites the limitation "the multilayer structure". There is insufficient antecedent basis for this limitation in the claim. It is suggested that the claim be amended for example, to recite "said first multilayer substrate".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11, 12, 14-16, 20, 22, 23 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 3,647,508 to Gorrell.

Regarding Claim 11, Gorrell teaches a process for the partial demetallization of a first multilayer substrate (100) comprising a polymer layer, and a metallic layer, (Col. 2, Lines 70-71) the process comprising applying an etchant lacquer comprising at least one metal dissolving etchant on the metallic layer in a quantity of about the stoichiometrical amount needed to dissolve the metallic layer, wherein the dissolved metal remains within the multilayer structure, (Col. 2, Lines 14-24, Col. 8, Lines 18-22) and the dissolution of the metal creates a substantially transparent window in the metallic layer in a washing-free step. (Col. 3, Lines 45-50)

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Gorrell does not expressly teach a co-extruded film comprising a polypropylene layer, an adhesive layer or eliminating any chemical reactivity of the at least one etchant towards the adhesive layer. However, since the claim does not positively recite any steps including an adhesive layer, or a co-extruded film comprising a polypropylene layer, the steps are not given patentable weight as they read broadly on an intended use of the metallic layer. Further, the steps even if positively recited are well known in the art as recited in the background of applicant's specification.

Regarding Claim 12, Gorrell teaches the process is carried out using standard gravure or flexo printing presses or coating equipment. (Col. 2, Lines 68-75)

Regarding Claims 14-16, Gorrell teaches a coating operation and a printing operation for treating the multilayer substrate as broadly recited since the etchant solution is coated on the substrate using a printing technique. (Col. 2, Lines 68-75)

Regarding Claim 20, Gorrell teaches the amount of etchant is fine-tuned by adapting the concentration of the etchant. (Col. 4, lines 7-8)

Regarding Claim 22, the light transmission of at least 90% within the demetallized area is provided by completely dissolving of the metal layer and forming a chemical complex, or else arises from essential limitations not provided in the claims, i.e. since both the claimed invention and Gorrell teach printing an etch solution in a quantity to dissolve the metal in a region of a metallized film, and apparently use the same particular etch solutions, (*See Paragraph 38 of the instant specification*) the chemical complex formed by etching would be expected to be the same or else the transparency characteristic somehow arises from essential limitations that have not been described in the disclosure of applicant's invention.

Regarding Claim 23, Gorrell necessarily provides a slight excess of the stoichiometrical amount needed to dissolve the amount of metal to provide complete dissolution of the metal, as a matter of completely dissolving the metal in a region, since the chemical reaction cannot, in practice, go entirely to completion, such that all the metal in a region is dissolved, by using only a stoichiometric amount of etchant solution since some of the etchant is absorbed by the body forming member.

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Regarding Claim 24, Gorrell teaches a window in a metallic layer optionally retaining a total quantity of residue resulting from demetallization. See especially Figure 2, (Col. 1, Line 74 - Col. 2, Line 24), (Col. 3, Lines 45-55) and (Col. 8, Lines 18-22).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13, 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 3,647,508 to Gorrell in view of U.S. Patent 4,959,120 to Wilson

Regarding Claim 13, Gorrell teaches the method of the invention substantially as claimed, but does not expressly teach laminating the partly demetallized multilayer substrate with a second substrate. However, it is old in the demetallized packaging art to laminate a demetallized web to another substrate using a suitable adhesive. For example, Wilson teaches a demetallized web may be laminated to a substrate (49) of paperboard, which functions as a support. (Col. 4, lines 60-67) Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to laminate the demetallized web of Gorrell to a support in order to provide packaging support the well-known manner.

Regarding Claims 19 and 21, Gorrell teaches the method of the invention substantially as claimed, but does not expressly teach choosing suitable gravure cylinder depth and adapting the concentration of the at least one etchant. However, it is well known in the demetallization art to fine-tune the amount of etchant by choosing suitable gravure cylinder depth. See Wilson, for example, (Col. 6, Lines 10-20). In view of Wilson, it would have been obvious to one of ordinary skill in the art at the time of invention to choose a suitable gravure cylinder depth for printing the etchant of Gorrell, as well as a suitable etchant concentration, in order to control droplet size (etchant amount) and thus the amount of metal removed.

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Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 3,647,508 to Gorrell in view of applicants admitted prior art (APA).

Regarding Claims 17 and 18, Gorrell teaches the method of the invention substantially as claimed, but does not expressly teach a coating operation and a printing operation for treating the multilayer substrate in register with the demetallized area on a surface of the substrate that is different than where the demetallization is carried out.

However, applicant's admitted prior art (Paragraphs 2-10 of the Specification) teach that it is known to provide a substrate for demetallization comprising a preprinted and coated material in register with the demetallized area on a surface of the substrate that is different than where the demetallization is carried out (Page 2, Lines 15-30). It would have been obvious to one of ordinary skill in the art at the time of invention to perform the conventional steps of printing with inks and coating with overlaquer as recited in applicant's admitted prior art in order to provide and protect a printed design on consumer packaging in the well known manner.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberts Culbert whose telephone number is (571) 272-1433. The examiner can normally be reached on Monday-Friday (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



R. Culbert
Examiner
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